

WASHINGTON STATE DEPARTMENT OF ECOLOGY

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

SCOPE OF ACCREDITATION

Analytical Resources, Incorporated

Tukwila, WA

is accredited for the analytes listed below using the methods indicated. Full accreditation is granted unless stated otherwise in a note. Accreditation for U.S. Environmental Protection Agency (EPA) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846) is for the latest version of the method. SM refers to EPA approved editions of "Standard Methods for the Examination of Water and Wastewater." ASTM is the American Society for Testing and Materials. Other references are described in notes.

Matrix/Analyte	Method	Notes
Drinking Water		
Aluminum	EPA 200.8	1
Antimony	EPA 200.8	1
Arsenic	EPA 200.8	1
Barium	EPA 200.8	1
Beryllium	EPA 200.8	1,5
Cadmium	EPA 200.8	1
Chromium	EPA 200.8	1
Copper	EPA 200.8	1
Iron	EPA 200.8	1
Lead	EPA 200.8	1
Manganese	EPA 200.8	1
Mercury	EPA 245.1	1
Nickel	EPA 200.8	1
Selenium	EPA 200.8	1
Silver	EPA 200.8	1
Thallium	EPA 200.8	1
Zinc	EPA 200.8	1
Regulated VOCs	EPA 524.2	1
Total trihalomethanes	EPA 524.2	1,5
Unregulated VOCs	EPA 524.2	1
Vinyl chloride	EPA 524.2	1
Volatile Organic Compounds	EPA 524.2	1

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Matrix/Analyte	Method	Notes
Non-Potable Water		
Alkalinity	SM 2320 B	1
Alkalinity as CaCO ₃	SM 2320 B	1
Amenable cyanide	SM 4500-CN I	
Ammonia as N	EPA 350.1	1
Ammonia as N	SM 19/20 4500-NH ₃ D	1
Biochemical oxygen demand	SM 5210 B	1
Bromide	EPA 300.0	1
Bromide	SM 4110 B	1
Chemical oxygen demand	EPA 410.4	1
Chemical oxygen demand	SM 5220 D	1
Chloride	EPA 300.0	1
Chloride	SM 4110 B	1
Color	SM 2120 B	1
Conductivity	EPA 120.1	1
Conductivity	SM 2510 B	1
Cyanides, Amenable to Chlorination	SM 4500-CN G	1
Fluoride	EPA 300.0	1
Fluoride	SM 4110 B	1
Fluoride	SM 4500-F C	1
Hardness (calc.)	SM 2340 B	1
Nitrate	EPA 300.0	1
Nitrate	EPA 353.2	1
Nitrate	SM 4110 B	1
Nitrate-nitrite	EPA 353.2	1
Nitrite	EPA 300.0	1
Nitrite	EPA 353.2	1
Nitrite	SM 4110 B	1
Nitrogen, Total Kjeldahl	EPA 351.2	
Nitrogen, Total Kjeldahl	SM 4500-Norg D	
Oil & Grease	EPA 1664	1
Orthophosphate as P	EPA 300.0	1
Orthophosphate as P	SM 4110 B	1
Orthophosphate as P	SM 4500-P E	
pH	SM 4500-H	1

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Matrix/Analyte	Method	Notes
Phosphorus, total	SM 4500-P E	
Residue-filterable (TDS)	SM 2540 C	1
Residue-nonfilterable (TSS)	SM 2540 D	1
Residue-settleable	SM 2540 F	1
Residue-total	SM 2540 B	1
Residue-volatile	EPA 160.4	1
Salinity	SM 2520 B	1
Sulfate	EPA 300.0	1
Sulfate	EPA 375.2	1
Sulfate	SM 4110 B	1
Sulfide	SM 4500-S2 D	1
Sulfide	SM 4500-S2 F	1
Sulfite-SO3	SM 4500-SO3 B	1
Total cyanide	SM 4500-CN E	1
Total organic carbon	SM 5310 B	1
Total phenolics	EPA 420.1	1
Turbidity	EPA 180.1	1
Turbidity	SM 2130 B	1
Aluminum	EPA 200.7	1
Aluminum	EPA 200.8	1
Antimony	EPA 200.7	1
Antimony	EPA 200.8	1
Arsenic	EPA 200.7	1
Arsenic	EPA 200.8	1
Barium	EPA 200.7	1
Barium	EPA 200.8	1
Beryllium	EPA 200.7	1
Beryllium	EPA 200.8	1
Boron	EPA 200.7	1
Cadmium	EPA 200.7	1
Cadmium	EPA 200.8	1
Calcium	EPA 200.7	1
Calcium	EPA 200.8	1
Chromium	EPA 200.7	1
Chromium	EPA 200.8	1
Cobalt	EPA 200.7	1

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Matrix/Analyte	Method	Notes
Cobalt	EPA 200.8	1
Copper	EPA 200.7	1
Copper	EPA 200.8	1
Iron	EPA 200.7	1
Iron	EPA 200.8	1
Lead	EPA 200.7	1
Lead	EPA 200.8	1
Magnesium	EPA 200.7	1
Magnesium	EPA 200.8	1
Manganese	EPA 200.7	1
Manganese	EPA 200.8	1
Mercury	EPA 245.1	1
Molybdenum	EPA 200.7	1
Molybdenum	EPA 200.8	1
Nickel	EPA 200.7	1
Nickel	EPA 200.8	1
Potassium	EPA 200.7	1
Potassium	EPA 200.8	1
Selenium	EPA 200.7	1
Selenium	EPA 200.8	1
Silica as SiO ₂	EPA 200.7	1
Silver	EPA 200.7	1
Silver	EPA 200.8	1
Sodium	EPA 200.7	1
Sodium	EPA 200.8	1
Strontium	EPA 200.7	1
Thallium	EPA 200.7	1
Thallium	EPA 200.8	1
Tin	EPA 200.7	1
Titanium	EPA 200.7	1
Vanadium	EPA 200.7	1
Vanadium	EPA 200.8	1
Zinc	EPA 200.7	1
Zinc	EPA 200.8	1
Methane, Ethane & Ethene	EPA RSK-175	1,7
VOA & Semi-VOA Compounds	ARI SOP 427S	4

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Matrix/Analyte	Method	Notes
Butyl-tin Species	EPA 8270	
PCDDs/PCDFs	EPA 1613	
Vinyl Chloride/1,1-DCE	EPA 8260 SIM	
Fecal coliforms	SM 9222 D	
Total coliforms	SM 9222 B	
Microtox, WDOE Sediment	WDOE 03-09-043 SubApp B&C	8
Solid and Chemical Materials		
Amenable cyanide	EPA 9010	1
Ammonia	EPA 350.1	1
Ammonia	EPA 350.3	1
Ammonia	SM 4500-NH3 D-97 online	1
Ammonia	SM 4500-NH3 H-97 online	1
Bromide	EPA 9056	1
Chloride	EPA 9056	1
Chloride	EPA 9251	1
Chromium, Hexavalent	EPA 7196	1
Corrosivity	EPA 9040	1
Fluoride	EPA 9056	1
Fluoride	EPA 9214	1
Free cyanide	EPA 9014	1
Nitrate	EPA 9056	1
Nitrate + Nitrite	EPA 353.2	1
Nitrate + Nitrite	SM 4500-NO3 I	10
Nitrite	EPA 9056	1
Nitrogen, Total Kjeldahl	EPA 351.2	
Nitrogen, Total Kjeldahl	SM 4500-Norg D	
Oil & Grease	EPA 9071 B	1
Orthophosphate as P	EPA 9056	1
Oxydation-Reduction Potential (ORP)	SM 2580 B	1
pH	EPA 9040	1
pH	EPA 9045	1
pH (non-aqueous)	EPA 9045	1
Phosphorus, total	SM 4500-P E	1

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Matrix/Analyte	Method	Notes
Solids, Total, Fixed and Volatile	SM 2540 G	10
Sulfate	EPA 9056	1
Sulfate	SM 4500-SO4» G-97 online	10
Sulfide	EPA 9030	1
Sulfide	EPA 9034	1
Total cyanide	EPA 9010	1
Total cyanide	EPA 9014	1
Total organic carbon	EPA 9060	1
Total organic carbon	PSEP 1986 Combust/Grav	
Total phenolics	EPA 9065	1
Aluminum	EPA 6010	1
Aluminum	EPA 6020	1
Antimony	EPA 6010	1
Antimony	EPA 6020	1
Arsenic	EPA 6010	1
Arsenic	EPA 6020	1
Barium	EPA 6010	1
Barium	EPA 6020	1
Beryllium	EPA 6010	1
Beryllium	EPA 6020	1
Boron	EPA 6010	1
Cadmium	EPA 6010	1
Cadmium	EPA 6020	1
Calcium	EPA 6010	1
Calcium	EPA 6020	1
Chromium	EPA 6010	1
Chromium	EPA 6020	1
Cobalt	EPA 6010	1
Cobalt	EPA 6020	1
Copper	EPA 6010	1
Copper	EPA 6020	1
Iron	EPA 6010	1
Iron	EPA 6020	1
Lead	EPA 6010	1

Analytical Resources, Incorporated

Matrix/Analyte	Method	Notes
Lead	EPA 6020	1
Magnesium	EPA 6010	1
Magnesium	EPA 6020	1
Manganese	EPA 6010	1
Manganese	EPA 6020	1
Mercury in Sediments	EPA 245.5	1
Mercury, Liquid Waste	EPA 7470	1
Mercury, Solid Waste	EPA 7471	1
Molybdenum	EPA 6010	1
Molybdenum	EPA 6020	1
Nickel	EPA 6010	1
Nickel	EPA 6020	1
Potassium	EPA 6010	1
Potassium	EPA 6020	1
Selenium	EPA 6010	1
Selenium	EPA 6020	1
Silica as SiO ₂	EPA 6010	1
Silver	EPA 6010	1
Silver	EPA 6020	1
Sodium	EPA 6010	1
Sodium	EPA 6020	1
Strontium	EPA 6010	1
Thallium	EPA 6010	1
Thallium	EPA 6020	1
Tin	EPA 6010	1
Titanium	EPA 6010	1
Vanadium	EPA 6010	1
Vanadium	EPA 6020	1
Zinc	EPA 6010	1
Zinc	EPA 6020	1
BTEX	EPA 8021	9
Chlorinated Herbicides	EPA 8151	1
Low Level Pesticides	ARI SOP 423S	7
Organochlorine Pesticides	EPA 8081	1
Petroleum Hydrocarbons, Extractable	WA EPH	1
Petroleum Hydrocarbons, Volatile	WA VPH	1

Matrix/Analyte	Method	Notes
Phenols	EPA 8041	
Polychlorinated Biphenyls	EPA 8082	1,6
Total Pet Hydrocarbons - Diesel	EPA 8015	9
Total Pet Hydrocarbons - Diesel	WDOE NWTPH-Dx	1,3
Total Pet Hydrocarbons - Gasoline	EPA 8015	9
Total Pet Hydrocarbons - Gasoline	WDOE NWTPH-Gx	1,3
VOA & Semi-VOA Compounds	ARI SOP 427S	4
Volatile Aromatics	EPA 8021	1
BNA Extr (Semivolatile) Organics	EPA 8270	1
Butyl-tin Species	EPA 8270	
Organophosphorus Pesticides	EPA 8270	1,2
PCDDs/PCDFs	EPA 1613	
PCDDs/PCDFs	EPA 8290	
Polycyclic Aromatic HC	EPA 8270 SIM	1,2
Vinyl Chloride/1,1-DCE	EPA 8260 SIM	2
Volatile Organic Compounds	EPA 8260	1
Particle Size Distribution	ASTM D 422	
Particle Size Distribution	PSEP 1986 Wet Sieve	

Accredited Parameter Note Detail

(1) Recognition of Oregon NELAP accreditation. (2) GC-MS Selective Ion Monitoring (SIM). (3) Washington Department of Ecology Analytical Methods for Petroleum Hydrocarbons, Publication Number ECY 97-602, June 1997. (4) ARI SOP for Water Soluble Non-halogenated Volatile and Semivolatile Organic Compounds, including glycols. (5) Provisional accreditation pending submittal of additional, acceptable Proficiency Testing (PT) results (WAC 173-50-110). (6) Includes capability for low levels in aqueous samples using a modified hexane extraction. (7) ARI SOP 710S. (8) WDOE. Modification of PSEP Microtox Method. WDOE 02-09-043, Subappendix B & C. 2003. (9) Accreditation based in part on recognition of California ELAP accreditation. (10) Accreditation based in part on recognition of DoD-ELAP accreditation.



7/20/2011

Authentication Signature
 Alan D. Rue, Lab Accreditation Unit Supervisor

Date